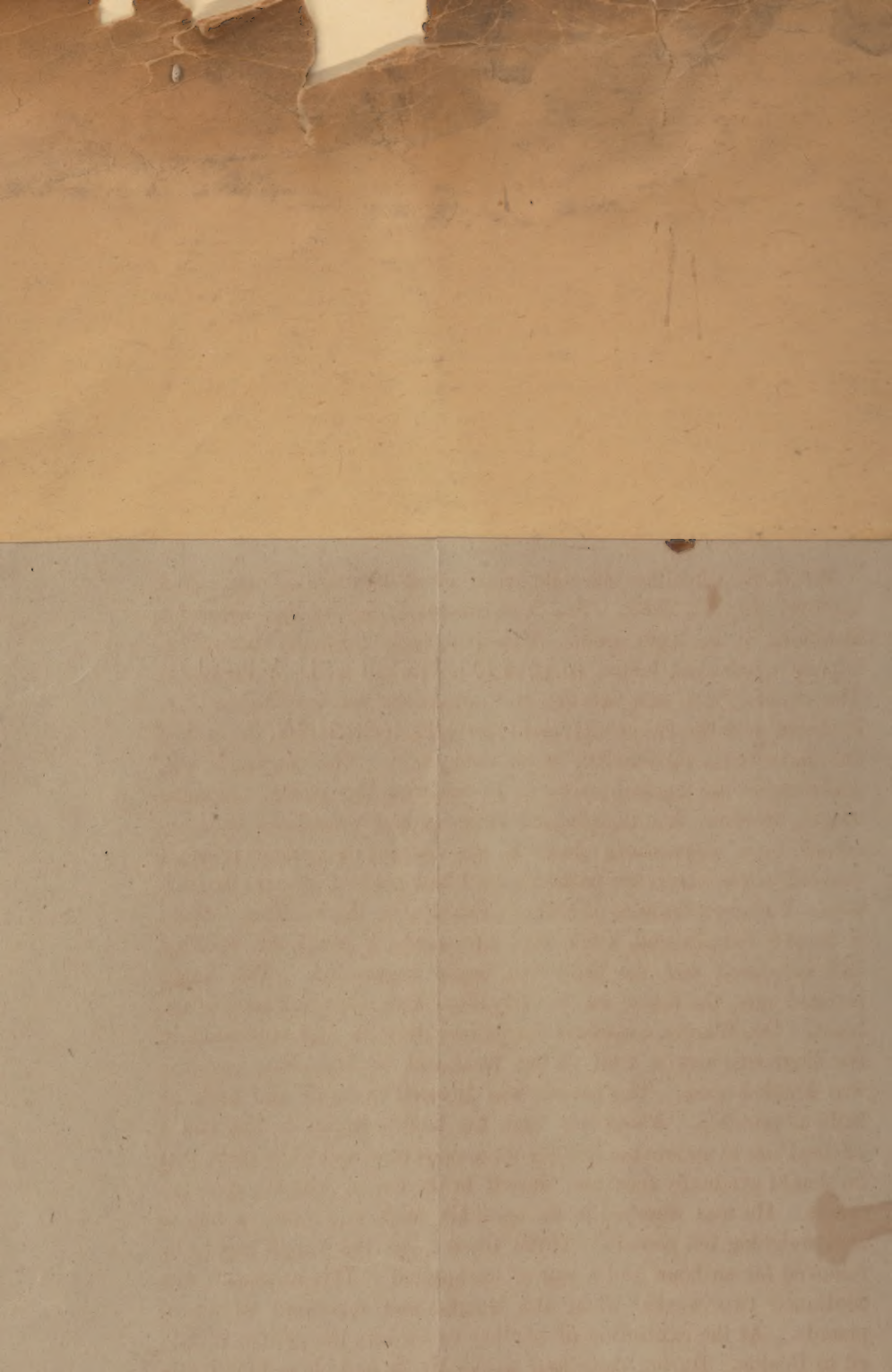


Brown (ack)

FEMORAL ANEURISM TREATED BY
IMMEDIATE COMPRESSION.

BY BUCKMINSTER BROWN, M. D.





FEMORAL ANEURISM

TREATED BY IMMEDIATE COMPRESSION.

By BUCKMINSTER BROWN, M.D.

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MR. E. S., a healthy, muscular man, about 38 years of age, called upon me July 11, 1863. Ten days previously he had first noticed a throbbing in the right groin. This had been gradually increasing. I found a pulsating tumor, about three and a half inches in diameter. The swelling was soft, and the fluid apparently just beneath the skin. Pressing with the finger, the posterior walls could be felt, the end of the finger being surrounded by pulsating fluid. The diagnosis was, aneurism of the femoral artery at its exit from the pelvis. Remembering, however, that experienced surgeons had sometimes been deceived by a suppurating gland in the vicinity of a large artery, I decided not to alarm the patient until I had made a second examination. I advised tincture of iodine painted upon the swelling. Upon a second examination, a few days afterwards, I found the swelling had increased and the throbbing much augmented. The finger pressed upon the tumor was forcibly lifted with every pulsation of the heart. Dr. Warren examined the patient July 31, and coincided in the diagnosis, and a trial of the treatment by immediate pressure was decided upon. The patient was directed to stand and walk as little as possible. About this time his health began to fail, and I advised him to go into the country for a short time, and while there that he should gradually accustom himself to the use of weights upon the tumor. He was directed to lie upon his back, and apply a bag of shot weighing ten pounds. Three times a day the weight was to be removed for an hour, and a bag of ice applied. This treatment was continued two weeks, when the weight was increased to fifteen pounds. At the expiration of another two weeks the patient returned to Boston. During these four weeks Mr. S. had obeyed implicitly my directions. The weight had been kept on the tumor day and

night. It had caused a good deal of pain, and he had consequently obtained but little sleep. I found, on his return, there was a change for the better. Less throbbing and the tumor somewhat diminished in size. Three times a day he had walked from the bed to the lounge, and this was all the exertion he had made. He was now directed to lie persistently upon his back, and to make no voluntary effort whatever. He was carefully lifted upon the lounge in the morning, and at night carried to his bed. Ice was used for an hour in the night as well as in the day; as a change from the weight, this was a great relief. This course was pursued for some weeks, when, at the suggestion of Dr. Warren, I commenced using cannon balls, in order to concentrate the weight more accurately over the tumor. The first ball used weighed twelve pounds. In a short time this was doubled, using a ball weighing twenty-four pounds. These balls were enclosed in a bag, which was secured to his person in such a way that it could not slip. The twenty-four pounder at first could be borne only from two to five minutes. The bag of shot, the twelve-pound and the twenty-four-pound balls were used alternately for another four weeks. The result was encouraging. The pulsation was less forcible, the tumor had lessened and its parietes had become hard and comparatively inelastic, and the artery below the aneurism was evidently diminishing in calibre. The patient was now able to bear the weight of the twenty-four pound ball constantly during the day, except when relieved by the application of ice. His diet was carefully regulated; meat was interdicted, and only light, farinaceous food allowed. About this time I discovered a small pulsating tumor on the top of the right foot, at the base of the metatarsal bone of the great toe—probably a dilatation of the *arteria dorsalis pedis*. This was cured in a short time by pressure with a piece of India-rubber and a bandage. In order to check circulation in the limb as much as possible, I applied a bandage from the toes to the groin. This afterwards gave place to a firm, silk, elastic stocking, two inches less in circumference than the leg, extending likewise from the toes to the groin. I also had made a strong leather belt to pass round the hips, with a groin strap. By this means I was able to produce powerful pressure upon the bag of shot, which was worn during the night.

This treatment was continued, with little variation, from October, 1863, to June, 1864. The artery below the aneurism was now ex-

tremely small and its pulsation scarcely perceptible. The swelling had much diminished in size, had become hard, and its action comparatively feeble. I now decided to continue the treatment which had thus far been attended with so favorable a result, but to apply my pressure in another form, and, if possible, in such a manner as to admit of locomotion. A wide, strong, firm leather belt was made, thoroughly padded, which was fastened tightly around the hips; to this was attached a strap passing from behind the trochanter to buckles over Poupart's ligament. A pad was adapted to the tumor—hard, oblong and convex, with a block-tin back. This pad was held in position by the strap passing through loops to the buckles. By these means I found I could apply a very considerable amount of force. These straps having been adjusted, I allowed the patient to sit up and walk a short distance each day. At first his legs were very weak; he rapidly gained strength, however, and was soon able to walk out, and in September, 1865, he began to attend to business, walking once a day from the neighborhood of the Boylston Market to Tremont Row. The pad was so accurately adapted to its intended position, and so firmly held there, that motion of the joint did not displace it, and thus a strong pressure upon the tumor was insured, even during active exercise. He continues to wear the belt and pad night and day, never removing it, except when in the horizontal position, and then only for a few moments for the purpose of bathing the part or to dress the excoriations produced by the belt upon the hips. On my last examination, about three weeks since, the artery below the swelling could not be felt, having, so far as could be ascertained, become obliterated by the constant pressure. The tumor pulsated feebly, had become harder, and had little elasticity.

The patient was upon his back ten months, and has been under surveillance between sixteen and seventeen months; during the first part of this time the pain and weariness wore upon him somewhat. His health, however, continued good, and his digestion was rarely disarranged. After five months he had become accustomed to the treatment, and began to grow fat; and when he left his chamber he found he had gained twenty pounds during his confinement. I had, it is fair to state, an extraordinary patient to deal with. Mr. S. bore pain, continuing night and day for so many months, with a fortitude and even cheerfulness which could not be surpassed.

The result of the treatment by pressure in this case is certainly

satisfactory. The attendant circumstances were such as, from the first, to indicate an almost hopeless prognosis. The nature of the disease, its situation just beneath Poupart's ligament, must render any operation which might have been attempted exceedingly dangerous, if not probably fatal. The ligation of the external iliac is an operation certainly not to be undertaken but as a last resort. When, in addition, we consider the aneurismal tendency of the arteries, as indicated by the swelling of this nature on the dorsum of the foot, the aspect of the case was sufficiently discouraging, and a favorable result from an operation could not have been anticipated. To check the flow of blood through the aneurism by pressure applied above was impossible, as the tumor was directly upon the border of the pelvis. The application of immediate pressure in any other way than that employed, as by tourniquet, must necessarily have been attended by disadvantages, and was—after being duly considered—rejected. The course pursued was one which required constant vigilance to guard against excoriation and ulceration of the skin over the swelling, and this, by great care, was prevented. The belt around the hips, which was necessarily tightly strapped in order to obtain a firm purchase for the compressing strap, has from time to time caused sores which have been difficult to heal. There has been no complaint of numbness of the limb, nor any tendency to paralysis. The diseased leg, at the calf, is one and three fourths inches larger than the other.

